Module name: **Electrical Circuits 2**
Module ID: **IS-FEE-10085S**
Module type: **Class**
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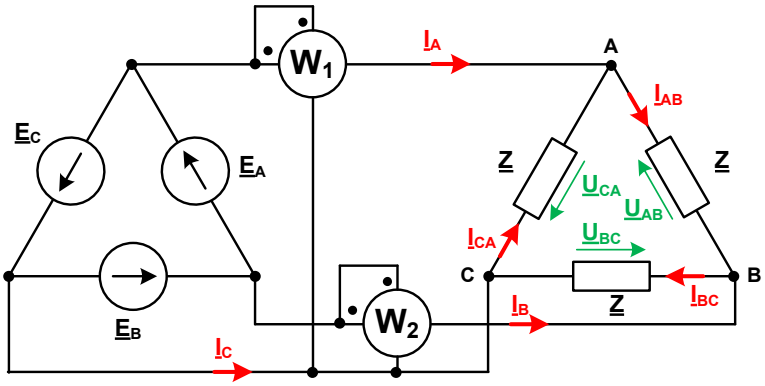
Class 7 (23.04.2024)

1. In a 3-phase balanced Δ-Δ system, the source voltage is E_{ph} = 230 V rms. The impedance per phase $\underline{Z}$ = (8+j6) Ω. Find the line currents, active power of the load and wattmeters readings.



2. The three-phase electric heater consists of three heating coils Y-connected (Fig). The nominal power of the heater is P_n = 3 kW, and the nominal voltage U_n = 230 V rms. The heater has been damaged. After its repair the length of the first coil decreased by 5% and the length of the second coil by 10%.

   a) calculate line currents before repairing the heater,

   b) calculate line currents, the current in the neutral line and the power of the repaired heater,

   c) calculate line currents and the power of the repaired heater, when the neutral line is not connected.